

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1064507	A	19920916	CN 1992-100414	19920123 <--

# ABSTRACT:

The Fe alloys contain Mn 22-28, Si 2.5-5, C 0.02-0.06, Ni 1-3.5, Cr 0.8-4 with (Ni + Cr) 2.3-5, and optionally Al .ltoreq.2.6 and N .ltoreq.0.08%. The alloys are deformed to 4% strain near the martensite initiation temp. and aged at 300-400.degree. for 0.5 h in 3 cycles, and then show restorable deformation of 4% at 100% efficiency.

SUPPL. TERM: iron manganese alloy shape memory; silicon shape memory iron alloy

INDEX TERM: Memory effect, chemical and physical  
(shape, of iron-manganese-silicon alloys, heat treatment for)

INDEX TERM: 147260-02-4 147260-03-5 147260-04-6 147386-13-8  
ROLE: PRP (Properties)  
(shape memory effect of, heat treatment for)

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**FE-MN-SI SERIES MARMEM WITH LOW NICKEL-CHROMIUM**

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Patent Family:

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CN 1064507	A	920916 (Basic)

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Abstract: The present alloy consists of Fe, Mn, Si, Ni, Cr, etc. The impurity content of the said alloy is controlled in relative wider range, resulting in simple smelting process and low cost. It has good cold and heat processing properties and can be rolled into strip, wires, and tubes. The said alloy has good shape recall ability after proper heat treatment with shape restoration rate of about 90% for deformation less than 3% and increased shape restoration rate to 100% through 3 times of training. The present alloy also has high strength, tenacity, and corrosion-resistance and is non-magnetic. It is suitable for making union joints, fastening pieces, temperature transducing elements, etc.

IPC: C22C-038/58; C22C-038/04